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Adherence of *Candida Albicans* to Different Finished Surfaces of PMMA Resins Reinforced with Glass E Fibers

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Candida albicans has been widely associated with the etiology of denture-related stomatitis. When fiber reinforcement is used in the denture base as a total fiber reinforcement, the fibers may be exposed during the finishing of the denture. This may lead to oral disease if the fibers come into contact with the oral mucosa. In this study the adherence of *Candida albicans* to the surface of PMMA and to the surface of E glass fibers of composite material used in dentures was compared. E glass fibers coated with Silan 1 (silan + epoxy resin) and Silan 2 (silan + polyester resin) were used to reinforce denture base polymethyl metacrylate resin. Specimens were produced by two different methods. In the first group the fibers were wetted with a mixture of polymer powder and monomer liquid. In the second group the fibers were wetted in polymer liquid for 15 minutes and then blended with PMA polymers. All of the samples were heat cured. Half the prepared specimens were polished and the other half left unpolished. Replicates and yeast cells (*Candida albicans* ATCC, 90028, 1.0×10^7 cells/ml) were placed in wells and incubated for 1 h at 37°C on an orbital shaker at 80 rpm. The replicates were air dried and mounted on glass slides and stained with a solution of 0.5% crystal violet and 1.0% iodine. The number of adherant yeast cells were counted under a light microscope (400x).

RESULTS:

1. Less *Candida albicans* adhered to the Polished surface ($P < 0.01$).
2. The highest *Candida albicans* accumulation was observed on the Silan 2 (silan + poly ester resin) coupling samples ($P < 0.001$). The type of material used for silanization is an important factor, effecting the amount of *Candida albicans* accumulation.

105.

The Mechanical Strength of Acrylic Palatal Plates Reinforced with Net or Bundle Glass Fibers

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The aim of the study was to evaluate the resistant forces of acrylic palatal plates reinforced with glass net and unidirectional glass fibers. The form and models of the edentulous jaw (Frasaco) were used in the study. Palatal plates were made from hot polymerised acrylic SR Triplex Hot (Ivoclar). In the total reinforced method the studied palatal plates used were reinforced with one or three layers of fiber glass net (Stick Net). In the partial reinforced method acrylic palatal plates were reinforced with one bundle of unidirectional glass fibers (Stick). Acrylic resin and glass fibers were prepared and polymerised according to the manufacturer's recommendation. Palatal plates were kept two weeks in water before the tests. Measurements of mechanical properties were made using loading in a universal resistance machine (FM Rauenstein). The palatal plates were loaded with a force in the symmetric plane. The results were compared with measurements in the control group, where acrylic palatal plates lacked reinforcement. Acrylic palatal plates reinforced with glass net, and plates without reinforcement break into pieces under loading. Palatal plates reinforced with bundle of glass fiber cracked under loading without being broken to pieces. The greatest strength of the studied palatal plates was observed in plates with three layers of glass net.

106.

Injuries to the Stomatognathic System in Tae-Kwon-Do

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Martial arts are high-risk sports for injuries to the stomatognathic system, according to the FDI classification. The aim of this investigation was to determine frequency, type and severity of injuries to the stomatognathic